Selected Topics - Sculpture
Spring, 2 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. P.M. (STA 350 or STA 351 or STA 354 or STA 355): R. Approval of department.
Issues of technique, style, and content in sculpture.

Selected Topics - Graphic Design
Spring, 2 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. P.M. (STA 360): R. Approval of department.
Issues of technique, style, and content in graphic design.

Selected Topics - Photography
Fall of odd years. 2 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. RB: Art education major, education major, art education professionals. Contemporary issues in art education. Fieldwork, studio work, and research-based written assignments.

Senior Seminar and Professional Practice (W)
Fall, Spring, 2(2-0): P.M.: Completion of Tier I writing requirement. R: Open only to seniors in the Studio Art major. C: STA 492A concurrently.
Capstone course for artists and designers. Writing as a mode of issue delineation and definition.

Exhibition Practicum
Fall, Spring, 1(1-1): P.M.: Completion of Tier I writing requirement. C: STA 492 concurrently.

Design Internship
Fall, Spring, 1 to 4 credits. A student may earn a maximum of 4 credits in all enrollments for this course. P.M: (STA 460 or STA 462 or STA 463 or STA 464 or STA 465 or STA 466 or STA 467 or STA 468): RB: and one other 400 level graphic design course. R: Approval of department, contract required prior to registration.
Field experience in a working design environment under supervision of a design professional: art director, graphic designer, or photographer.

Design Center
Fall, Spring, 4(0-8): P.M: (STA 460 or STA 462 or STA 463 or STA 464 or STA 465 or STA 466 or STA 467 or STA 468): RB: and one other 400 level graphic design course. R: Approval of department, contract required prior to registration.
Practicum in design problem solving, including extensive contact with selected clients at a professional level.

Painting
Fall, Spring, 2 to 8 credits. A student may earn a maximum of 40 credits in all enrollments for this course. R: Open only to Master of Fine Arts students in Studio Art. Approval of department.
Advanced study in a variety of painting media to foster independent development.

Screen Printing
Fall, Spring, 2 to 8 credits. A student may earn a maximum of 40 credits in all enrollments for this course. R: Open only to Master of Fine Arts students in Studio Art. Approval of department.
Theory and practice of screen printing as a means to create expressive imagery.

Lithography
Fall, Spring, 2 to 8 credits. A student may earn a maximum of 40 credits in all enrollments for this course. R: Open only to Master of Fine Arts students in Studio Art. Approval of department.
Theory and practice of lithography as a means to create expressive imagery.

Intaglio Printing
Fall, Spring, 2 to 8 credits. A student may earn a maximum of 40 credits in all enrollments for this course. R: Open only to Master of Fine Arts students in Studio Art. Approval of department.
Theory and practice of intaglio printing as a means to create expressive imagery.

Ceramics
Fall, Spring, 2 to 8 credits. A student may earn a maximum of 40 credits in all enrollments for this course. R: Open only to Master of Fine Arts students in Studio Art. Approval of department.
Advanced study in ceramics to foster independent development.

Sculpture
Fall, Spring, 2 to 8 credits. A student may earn a maximum of 40 credits in all enrollments for this course. R: Open only to Master of Fine Arts students in Studio Art. Approval of department.
Advanced study in a variety of three-dimensional media to foster individual development.

Graphic Design
Fall, Spring, 2 to 8 credits. A student may earn a maximum of 40 credits in all enrollments for this course. R: Open only to graduate students in Studio Art. Approval of department.
Planning and conceptualizing ideas for visual communication problems that are to be expressed in words and/or pictures. Design of research that will expose a mastery of visual aesthetics and concepts in information design.

Special Topics in Art Education
Fall, Spring, Summer, 1 to 3 credits. A student may earn a maximum of 3 credits in all enrollments for this course. R: Approval of department.
Special topics supplementing regular course offerings proposed by faculty on a group study basis for graduate students.

Master of Fine Arts Seminar
Fall, Spring, Summer. A student may earn a maximum of 12 credits in all enrollments for this course. R: Open only to Master of Fine Arts students in Studio Art. Approval of department.
Contemporary intellectual issues related to practice in the visual arts. Group critiques of individual scholarly and applied research.

Master of Fine Arts Research
Fall, Spring, 1 to 8 credits. A student may earn a maximum of 16 credits in all enrollments for this course. RB: 12 graduate credits in student's studio art discipline. R: Open only to Master of Fine Arts students in Studio Art.
Individual research project in the student's studio art discipline directed by major professor.

Department of Surgery
College of Human Medicine

Junior Surgery Clerkship
Spring, Summer. 6 to 12 credits. A student may earn a maximum of 12 credits in all enrollments for this course. RB: (SUR 608): R: Open only to graduate-professional students in the College of Human Medicine.
The surgical patient, surgical diagnosis, pre-operative evaluation and post-operative care.

Otolaryngology Clerkship
Fall, Spring, Summer. 6 credits. A student may earn a maximum of 18 credits in all enrollments for this course. RB: (SUR 608): R: Open only to graduate-professional students in College of Human Medicine.
Common otolaryngologic disorders, emergencies, Diagnosis and treatment. Primary physician's judgments about management.

Plastic Surgery Clerkship
Fall, Spring, Summer. 6 credits. A student may earn a maximum of 18 credits in all enrollments for this course. RB: (SUR 608): R: Open only to graduate-professional students in College of Human Medicine.
Principles of wound healing and tissue repair. Indications and applications of plastic surgery procedures.

Urology Clerkship
Fall, Spring, Summer. 6 credits. A student may earn a maximum of 18 credits in all enrollments for this course. RB: (SUR 608): R: Open only to graduate-professional students in College of Human Medicine.
Demonstration of clinical manifestations of genitourinary disease, investigative methods and techniques of diagnosis and management. Urologic emergencies and performance of basic urologic skills.
613 Orthopedic Surgery Clerkship
Fall, Spring, Summer. 6 credits. A student may earn a maximum of 18 credits in all enrollments for this course. RB: (SUR 614) R: Open only to graduate-professional students in College of Human Medicine. Diagnosis and management skills in common orthopedic problems. Orthopedic emergencies.

614 Neurosurgery Clerkship
Fall, Spring, Summer. 6 credits. A student may earn a maximum of 18 credits in all enrollments for this course. RB: SUR 608. R: Open only to graduate-professional students in College of Human Medicine. Problems related to common emergent and elective neurosurgery involving the brain, spine, and peripheral nerves. Neurological examinations, diagnostic methods.

615 Ophthalmology Clerkship
Fall, Spring, Summer. 6 credits. A student may earn a maximum of 18 credits in all enrollments for this course. RB: (SUR 608) R: Open only to graduate-professional students in College of Human Medicine. Medical and surgical treatment of eye diseases. Clinical experiences include private office practice, surgical observations, pre-and post-operative care.

616 Thoracic Surgery Clerkship
Fall, Spring, Summer. 6 credits. A student may earn a maximum of 18 credits in all enrollments for this course. RB: (SUR 608) R: Open only to graduate-professional students in College of Human Medicine. Problem solving in thoracic medicine and surgery. Pulmonary physiology. Diagnostic tools and tests, and indications for surgical procedures.

618 Anesthesia Clerkship
Fall, Spring, Summer. 6 credits. A student may earn a maximum of 18 credits in all enrollments for this course. RB: (SUR 608) R: Open only to graduate-professional students in College of Human Medicine. Common anesthetic agents. Performing anesthetic procedures under faculty supervision.

619 Sub-specialty Surgery Clerkship
Fall, Spring, Summer. 6 credits. A student may earn a maximum of 18 credits in all enrollments for this course. RB: (SUR 608) R: Open only to graduate-professional students in College of Human Medicine. Surgical domains not covered otherwise or in which students desire further exposure.

620 Senior Surgery Clerkship
Fall, Spring, Summer. 6 to 12 credits. A student may earn a maximum of 12 credits in all enrollments for this course. RB: (SUR 608 and MED 608) R: Open only to graduate-professional students in the College of Human Medicine. Understanding of the principles of various surgical specialties, critically ill patients, or enhanced exposure to ambulatory general surgery.

633 Extended Clinical Experience
Fall, Spring, Summer. (6-0) Fall: All six(6) campuses. Spring: All six(6) campuses. Summer: All six(6) campuses. P:M: (SUR 633) R: Open only to mature, veteran and/or social service students. Based in community hospitals and ambulatory sites, this is a 4 week clinical experience emphasizing interviewing skills, history, physical exam, problem solving and therapy.

637 Core Competencies III
Fall, Spring, Summer. 2(2-0) Fall: same as below. Spring: Flint-Saginaw-GR-Lansing-Kalamazoo-UP. Summer: Flint-Saginaw-GR-Lansing-Kalamazoo-UP. A student may earn a maximum of 6 credits in all enrollments for this course. Interdepartmental with College of Medicine; Family Practice; Medicine; Obstetrics, Gynecology and Reproductive Biology; Pediatrics and Human Development. Administered by College of Human Medicine. R: Open only to graduate-professional students in College of Human Medicine.

Core knowledge and skills from an interdisciplinary perspective.

801 Shock and Metabolism
Fall. 4(4-0) R: Open only to M.S. students in Surgery. Results of prolonged reduction in tissue perfusion on tissue metabolism, structure, and function at the systemic, cellular and subcellular levels. Pharmacologic interventions useful in volume resuscitation.

803 Enteral and Parenteral Nutrition
Fall, Summer. 3(3-0) R: Open only to M.S. students in Surgery. Identification of individuals requiring nutritional support. Nutritional requirements in diseases. Delivery of total parenteral and enteral nutrition. Special problems.

804 Research Design and Quantitative Techniques for Surgical Residents
Spring. 3(3-0) R: Open only to students in master's degree program in Surgery. Recognition and differentiation between experimental designs. Identification of strengths and weaknesses of a manuscript. Recognition and definition of statistical terms and common inferential techniques used in surgical research. Use of computer software in research.

899 Master’s Thesis Research
Fall, Spring, Summer. 3 to 4 credits. A student may earn a maximum of 10 credits in all enrollments for this course. RB: (SUR 801 and SUR 802 and SUR 803 and SUR 804) R: Open only to M.S. students in Surgery. Approval of department. Master’s thesis research.

TEACHER EDUCATION

Department of Teacher Education
College of Education

120 Seminar in Integrated Science for Elementary Schools
Fall, Winter, Spring. 1(1-1) Interdepartmental with Science and Mathematics Education. Administered by College of Natural Science. P:M: (BS 110 or BS 111 or CEM 141 or PHY 231 or PSL 150 or GLG 201 or GEO 203) R: Open only to students in the Integrated Science Teaching major, the Special Education major, the Child Development major, the Elementary Teacher Education program, the 5th-year teacher certification program, or approval of college. Exploration of major connecting themes in life sciences, earth science, and physical science as evidenced in the K-8 science curriculum and college science courses.

150 Reflections on Learning
Fall, Spring, Summer. 3(3-0) Interdepartmental with Counseling, Educational Psychology and Special Education. Students’ experiences as learners in an examination of psychological, sociological, and anthropological theories and assumptions about learning and teaching in and out of school.

250 Human Diversity, Power, and Opportunity in Social Institutions
Fall, Spring, Summer. 4(3-4) P:M: Open only to students in the Integrated Science Teaching major, the Special Education major, the Child Development major, the Elementary Teacher Education program, the 5th-year teacher certification program, or approval of college. Comparative study of schools and other social institutions. Social construction and maintenance of diversity and inequality. Political, social and economic consequences for individuals and groups.

301 Learners and Learning in Context - Elementary (W)
Fall, Spring, Summer. 4(3-4) R: (TE 150) and (TE 250 or CEP 240) and completion of Tier I writing requirement. R: Not open to freshmen or sophomores. Open only to students admitted to the elementary teacher certification program. Role of social context and sociocultural background in learning at the elementary level (K-5). Natural and socially constructed differences among learners. Relationship among subject-specific knowledge, teaching and learning that subject, and the institutional and communal context. Multiple literacies.

302 Learners and Learning in Contexts – Secondary (W)
Fall, Spring, Summer. 4(3-4) P:M: (TE 150) and (TE 250 or CEP 240) Completion of Tier I writing requirement. R: Not open to freshmen or sophomores. Open only to students admitted to the secondary teacher certification program. Role of social context and sociocultural background in learning at the secondary level (6-12). Natural and socially constructed differences among learners. Relationship among subject-specific knowledge, teaching and learning that subject, and the institutional and communal context. Multiple literacies.